BlackBerry Enterprise Server for IBM Lotus Domino

Version: 5.0

Upgrade Guide

BlackBerry

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Overview: BlackBerry Enterprise Server

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The BlackBerry® Enterprise Server is designed to be a secure, centralized link between an organization's wireless network, communications software, applications, and BlackBerry devices. The BlackBerry Enterprise Server integrates with your organization's existing infrastructure, which can include messaging and collaboration software, calendar and contact information, wireless Internet and intranet access, and custom applications, to provide BlackBerry device users with mobile access to your organization's resources.

The BlackBerry Enterprise Server supports AES and Triple DES encryption to protect and ensure the integrity of wireless data that is transmitted between the BlackBerry Enterprise Server components and BlackBerry devices. You can select from more than 450 IT policy rules that you can configure to control the features of the BlackBerry devices that are used in your organization's environment.

The BlackBerry Enterprise Server supports several optional components and configurations to meet your organization's requirements. The BlackBerry Collaboration Service integrates with supported third-party instant messaging servers to permit users to access your organization's instant messaging system from their BlackBerry devices using the BlackBerry instant messaging client. The BlackBerry MDS Integration Service supports custom application development and distribution. You can configure the BlackBerry Enterprise Server and the BlackBerry Enterprise Server components to support high availability to enhance the consistency and reliability of your organization's environment.

You can manage the BlackBerry Enterprise Server, BlackBerry devices, and user accounts using the BlackBerry Administration Service, a web application that is accessible from any computer that can access to the computer that hosts the BlackBerry Administration Service. You can use the BlackBerry Administration Service to manage a BlackBerry Domain, which consists of multiple BlackBerry Enterprise Server instances that use a single BlackBerry Configuration Database.

Planning a BlackBerry Enterprise Server upgrade

2

If your organization's environment includes only one BlackBerry® Enterprise Server at version 4.0 SP7 or 4.1 SP3 or later, you can upgrade the BlackBerry Enterprise Server to the latest version by overwriting it or by installing the BlackBerry Enterprise Server on a different computer and moving the user data to the upgraded BlackBerry Enterprise Server.

If your organization's environment includes more than one BlackBerry Enterprise Server at version 4.1 SP3 or later, you can upgrade each BlackBerry Enterprise Server instance to the latest version in phases to reduce the risk to your organization's environment and minimize the number of users that are affected at the same time.

For information about upgrading more than one BlackBerry Enterprise Server, see the *BlackBerry Enterprise Server Upgrade Planning Guide*.

Supported BlackBerry Enterprise Server versions that you can upgrade from

You can upgrade from the following BlackBerry® Enterprise Server versions to the latest BlackBerry Enterprise Server version:

- BlackBerry Enterprise Server version 4.0 SP7 if your organization has only one BlackBerry Enterprise Server instance in the BlackBerry Domain
- BlackBerry Enterprise Server version 4.1 SP3 or later

Replacing the BlackBerry Manager with the BlackBerry Administration Service

In BlackBerry® Enterprise Server versions later than version 4.1, the BlackBerry Administration Service replaces the BlackBerry Manager as the BlackBerry Enterprise Server component that you use to manage the BlackBerry Enterprise Server and BlackBerry device users.

During the BlackBerry Enterprise Server upgrade process, the setup application removes the BlackBerry Manager. If you installed a standalone BlackBerry Manager, you can remove the BlackBerry Manager after you install the BlackBerry Administration Service.

After the BlackBerry Enterprise Server upgrade process completes, you must create administrator accounts for the administrators in your organization and provide the administrators with new login information and the BlackBerry Administration Service web address. If you try to run the BlackBerry Manager, it displays the "DB version greater than maximum currently supported" message and closes.

Upgrade implications for the BlackBerry Configuration Database

When you upgrade to the latest BlackBerry® Enterprise Server version, you must upgrade to the lastest BlackBerry Configuration Database version. To upgrade the BlackBerry Configuration Database, you can use the setup application to run the database upgrade scripts during the installation of the BlackBerry Administration Service or the installation upgrade of a BlackBerry Enterprise Server instance. If you do not want to use the setup application, you can run the database upgrade scripts on the database server to upgrade the BlackBerry Configuration Database. If you run the database upgrade scripts on the database server, you cannot manage the BlackBerry Enterprise Server until you install the BlackBerry Administration Service and a BlackBerry Enterprise Server instance.

When you upgrade to the latest BlackBerry Configuration Database version, the upgrade process deletes the role and the administration accounts. After you complete the BlackBerry Enterprise Server upgrade process, you must add the roles and administraion accounts to the BlackBerry Configuration Database using the BlackBerry Administration Service.

After you upgrade to the latest BlackBerry Configuration Database version, you cannot install earlier versions of BlackBerry Enterprise Server components. The BlackBerry Administration Service cannot manage earlier versions of BlackBerry Enterprise Server components that you install after you upgrade the BlackBerry Configuration Database.

The latest BlackBerry Enterprise Server version supports a BlackBerry Configuration Database that MSDE hosts, but you can upgrade MSDE to a version of Microsoft® SQL Server® that Microsoft supports. After you create a copy of the BlackBerry Configuration Database, you can move the copy to the later version of the Microsoft SQL Server before you upgrade the BlackBerry Enterprise Server to the latest version.

BlackBerry® Enterprise Server for IBM® Lotus® Domino® version 5.0 does not support the IBM® DB2® UDB. Support for the IBM DB2 UDB is planned for a future release.

Synchronizing data over the wireless network automatically

When you upgrade the BlackBerry® Enterprise Server, the BlackBerry Synchronization Service sends updated service books to the BlackBerry devices that can synchronize data over the wireless network. BlackBerry® Device Software versions 4.0 and later can synchronize data automatically if the BlackBerry Enterprise Server is running.

If the data does not synchronize automatically, you must use the BlackBerry Administration Service to resend the service books and synchronize the data.

Hardware requirements: BlackBerry Enterprise Server 3

The following are requirements for a BlackBerry® Enterprise Server and the BlackBerry Enterprise Server components that you install on a single computer, and excludes the BlackBerry Collaboration Service and the BlackBerry MDS Integration Service. The requirements are for a BlackBerry Enterprise Server environment that includes users that receive 100 to 200 email messages each day.

You can improve the performance and reliability of the BlackBerry Enterprise Server by installing the BlackBerry Enterprise Server components on multiple computers. If your BlackBerry Enterprise Server environment supports up to 1000 users, install the BlackBerry Configuration Database on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server. If your BlackBerry Enterprise Server environment supports up to 2000 users, install the BlackBerry Configuration Database and the BlackBerry Administration Service on computers that are separate from the computer that hosts the BlackBerry Enterprise Server.

Item	Requirement
BlackBerry Enterprise Server that supports up to 200 users	• Two processors, 2.0 GHz Intel® Xeon® • 3 GB of memory • 2 drives, RAID 1
BlackBerry Enterprise Server that supports up to 500 users	• Two processors, 2.8 GHz Intel Xeon • 3 GB of memory • 2 drives, RAID 1 or 4 drives, RAID 1+0
BlackBerry Enterprise Server that supports up to 1000 users	• One processors, 3.0 GHz Intel Xeon 5100 Series (Dual Core) or two processors, 1.6 GHz Intel Xeon 5100 Series (Dual Core) • 4 GB of memory • 4 drives, RAID 1+0
BlackBerry Enterprise Server that supports up to 2000 users	• 64-bit operating system recommended • Single processor, 2.83 GHz Intel Xeon 5400 Series (Quad Core) or two processors, 3.0 GHz Intel Xeon 5100 Series (Dual Core) • 4 GB of memory • 6 or 8 drives, RAID 1+0

System requirements

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For information about calculating hardware requirements, visit www.blackberry.com/go/serverdocs to see the *BlackBerry Enterprise Server Capacity Calculator* and *BlackBerry Enterprise Server Performance Benchmarking Guide*.

System requirements: BlackBerry Enterprise Server

Item	Requirement
operating system	Any of the following operating systems: • Windows Server® 2003 SP1 or later • Windows Server 2003 R2 • Windows Server 2003 (64-bit) • Windows Server 2003 R2 SP2 (64-bit) • Windows Server® 2008 or later • Windows Server 2008 (64-bit)
messaging server	Any of the following applications: • IBM® Lotus® Domino® version 7.0 with a primary Domain Directory (version 7.0.2 or later required for Windows Server 2003 [64-bit]) • IBM Lotus Domino version 8.0.0 or later with a primary Domain Directory • IBM Lotus Domino version 8.5.0 • IBM Lotus Domino Express version 7.0 • IBM Lotus Domino Express version 8.0
32-bit IBM Lotus Domino	A 32-bit IBM Lotus Domino server, even if the operating system is a 64-bit operating system
notes.ini file	A notes.ini file with the following conditions: • read and write permissions • SERVERKEYFILENAME value set to the server.id name
partitioning of the messaging server	A nonpartitioned messaging server on the computer that you plan to install the BlackBerry® Enterprise Server on
permissions for the messaging server	A messaging server with the following permissions: • membership in the LocalDomainServers group • manager-level access to the mail files for user accounts

Item	Requirement
DIIOP task running	In your organization's environment, an IBM Lotus Domino server running the DIIOP task and, if you are using IBM Lotus Domino authentication with BlackBerry Administration Service or BlackBerry® Web Desktop Manager, with the directory assistance feature turned on
database conditions for the BlackBerry® MDS Integration Service	A database server that hosts the BlackBerry Configuration Database
static IP address for the computer	To install the BlackBerry MDS Integration Service or the BlackBerry Administration Service in a pool, a static IP address for the computer
browser	Windows® Internet Explorer® version 6.0 or later with the following settings: • Java® or JavaScript® turned on • language preferences configured to display encoded web pages
media player	To support audio attachments, Windows Media® Player version 9 or later
network proximity	A high-speed, switched connection between the BlackBerry Enterprise Server and messaging servers
monitoring	To support the BlackBerry Monitoring Service, the SNMP service must be running

System requirements: BlackBerry Administration Service and BlackBerry Web Desktop Manager

The following system requirements apply when you install the BlackBerry® Administration Service and BlackBerry® Web Desktop Manager on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Windows Server® 2003 SP1 or later • Windows Server 2003 R2 • Windows Server 2003 (64-bit) • Windows Server 2003 R2 SP2 (64-bit) • Windows Server® 2008 or later • Windows Server 2008 (64-bit)
BlackBerry Web Desktop Manager users	To support BlackBerry Web Desktop Manager users, the following conditions:

Item	Requirement
	• IBM® Lotus® Domino® Internet accounts and passwords for BlackBerry Web Desktop Manager users • all user accounts located on the same IBM Lotus Domino server
browser	Windows® Internet Explorer® version 6.0 or later with the following settings: • Java® or JavaScript® turned on • language preferences configured to display encoded web pages
DIIOP task running	In your organization's environment, an IBM Lotus Domino server running the DIIOP task and, if you are using IBM Lotus Domino authentication with BlackBerry Administration Service or BlackBerry Web Desktop Manager, with the directory assistance feature turned on

System requirements: BlackBerry Enterprise Server databases

Item	Requirement
database management system	Any of the following database management systems: • MSDE 2000 SP4 • Microsoft® SQL Server® 2000 SP3 or SP4 • Microsoft SQL Server 2005 Standard, Enterprise, or Express • Microsoft SQL Server 2005 (64-bit) For all versions of the Microsoft SQL Server earlier than Microsoft SQL Server 2005 SP3, Microsoft Security Bulletin MS09-004 (for more information, visit http://technet.microsoft.com to read article KB960082).
collation setting	The following conditions on the database server: • collation set to default case-insensitive • BlackBerry® Configuration Database collation set to default case-insensitive
remote database conditions	Named pipes and TCP/IP network protocols turned on
database mirroring	To support database mirroring for the BlackBerry Configuration Database or BlackBerry MDS Integration Service database, the following conditions: • the database server must be Microsoft SQL Server 2005 SP2 (32-bit or 64-bit) • the database server that hosts the mirror database must use the same version and build as the principal database

Item	Requirement
	• a separate database server for the mirror database • static port with the same port number for both database servers • Microsoft SQL Server Browser running on both database servers
database transactional replication	To support database transactional replication for the BlackBerry Configuration Database or the BlackBerry MDS Integration Service database, the following conditions: • the database server must be Microsoft SQL Server 2000 SP3a or later • the database server that hosts the replicated database must use the same version and build as the primary database • if your organization's database server is Microsoft SQL Server 2000 SP3a, the "FIX: Distribution Agent Fails with 'Violation of Primary Key Constraint' Error Message" hotfix installed. For more information about installing the hotfix, visit www.support.microsoft.com to read article 813494.

System requirements: BlackBerry Attachment Service

The following system requirements apply when you install the BlackBerry® Attachment Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Windows Server® 2003 SP1 or later • Windows Server 2003 R2 • Windows Server 2003 (64-bit) • Windows Server 2003 R2 SP2 (64-bit) • Windows Server® 2008 or later • Windows Server 2008 (64-bit)
media player	To support audio attachments, Windows Media® Player version 9 or later
browser	Windows® Internet Explorer® version 6.0 or later with the following settings: • Java® or JavaScript® turned on • language preferences configured to display encoded web pages

System requirements: BlackBerry Collaboration Service

Item	Requirement
operating system	Any of the following operating systems: • Windows Server® 2003 SP1 or later • Windows Server 2003 R2 • Windows Server 2003 (64-bit) • Windows Server 2003 R2 SP2 (64-bit) • Windows Server® 2008 or later • Windows Server 2008 (64-bit)
IBM® Lotus® Sametime®	IP address of the BlackBerry® Collaboration Service computer added to the CommunityConnectivity document on the IBM Lotus Sametime server
Novell® GroupWise® Messenger	SSL authentication turned on for the Novell GroupWise Messenger agents on the Novell GroupWise Messenger server
Microsoft® Office Live Communications Server 2005 or Microsoft® Office Communications Server 2007	The latest Microsoft hotfixes installed.

System requirements: BlackBerry MDS Connection Service

The following system requirements apply when you install the BlackBerry® MDS Connection Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Windows Server® 2003 SP1 or later • Windows Server 2003 R2 • Windows Server 2003 (64-bit) • Windows Server 2003 R2 SP2 (64-bit) • Windows Server® 2008 or later • Windows Server 2008 (64-bit)

Item	Requirement
RSA® Authentication Agent	To support enhanced network authentication, RSA® Authentication Agent version 5.0 for Windows®
memory	One of the following: • if you install a central push server and less than a thousand user accounts, a minimum of 1024 MB • if you install a central push server and more than a thousand user accounts, a minimum of 3 GB • if you do not install a central push server, a minimum of 512 MB

System requirements: BlackBerry MDS Integration Service

The following system requirements apply when you install the BlackBerry® MDS Integration Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Windows Server® 2003 SP1 or later • Windows Server 2003 R2 • Windows Server 2003 (64-bit) • Windows Server 2003 R2 SP2 (64-bit) • Windows Server® 2008 or later • Windows Server 2008 (64-bit)
database conditions	A database server that also hosts the BlackBerry Configuration Database

System requirements: BlackBerry Monitoring Service

The following system requirements apply when you install the BlackBerry® Monitoring Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: • Windows Server® 2003 SP1 or later

Item	Requirement
	• Windows Server 2003 R2 • Windows Server 2003 (64-bit) • Windows Server 2003 R2 SP2 (64-bit) • Windows Server® 2008 or later • Windows Server 2008 (64-bit)
SNMP	The SNMP service running on the computer that hosts the BlackBerry Enterprise Server
browser	Windows® Internet Explorer® version 6.0 or later with the following conditions: • support for JavaScript® • cookies turned on
wireless modem	To send SMS messages to BlackBerry devices, an SMS wireless modem connected to the computer that accepts the AT command set

System requirements: BlackBerry Router

To install the BlackBerry® Router on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server, any of the following operating systems:

- Windows Server® 2003 SP1 or later
- Windows Server 2003 R2
- Windows Server 2003 (64-bit)
- Windows Server 2003 R2 SP2 (64-bit)
- Windows Server® 2008 or later
- Windows Server 2008 (64-bit)

System requirements: Computers for BlackBerry Web Desktop Manager users

Item	Requirement
operating system	Any of the following operating systems: • Windows® 2000 Professional SP4 or later • Windows® XP Professional SP2 • Windows Vista™
browser	Microsoft® Internet Explorer® version 6.0 or later

Item	Requirement

browser settings	To support BlackBerry® Web Desktop Manager, the following conditions must be met:
	• the BlackBerry Web Desktop Manager web address added as a trusted site or local intranet site
	• the following settings turned on to support Microsoft® ActiveX®:
	  • Automatic prompting for ActiveX controls
	  • Download signed Microsoft ActiveX controls
	  • Run ActiveX controls and plug-ins
	  • Script ActiveX controls marked safe for scripting
	• support for JavaScript®
	• support for TLS or SSL
	• the SSL certificate installed to permit trusted connections with the BlackBerry Administration Service
	• if using Windows Vista or Windows Server® 2008, the BlackBerry Administration Service web address added as a trusted site and Enable protected mode cleared

System requirements: Messaging server

Any of the following messaging servers that is located in close proximity to where you want to install the primary BlackBerry® Enterprise Server:

- IBM® Lotus® Domino® version 7.0 or later
- IBM Lotus Domino version 8.0.0 or later
- IBM Lotus Domino version 8.5.0
- IBM Lotus Domino Express version 7.0
- IBM Lotus Domino Express version 8.0

System requirements: Email applications for users

To support the BlackBerry® Enterprise Server, any of the following email applications:

- IBM® Lotus Notes® version 7.0 (to support encrypted message display when the user.id file is stored in BlackBerry® Desktop Manager version 4.1)
- IBM Lotus Notes version 8.0
- IBM Lotus Notes version 8.5

System requirements: Firewall

To install the BlackBerry® Enterprise Server, a firewall or proxy firewall with the following conditions:

- exclusive use of port 3101 to open and maintain an outgoing, two-way TCP/IP connection to an external server
- support for the resolution of Internet addresses that use DNS
- for proxy firewalls, transparency of the proxy server

System requirements: Instant messaging server

To install the BlackBerry® Enterprise Server, any of the following instant messaging servers:

- IBM® Lotus® Sametime® version 6.5.1 Community Server
- IBM Lotus Sametime version 7.0 Community Server
- IBM Lotus Sametime version 7.5 Community Server
- IBM Lotus Sametime version 8.0 Community Server
- Microsoft® Office Live Communications Server 2005 SP1 Standard or Enterprise
- Microsoft® Office Communications Server 2007 Standard or Enterprise
- Novell® GroupWise® Messenger version 2.0 or later

Supported features and environments

Item	Description
virtual environment	The BlackBerry® Enterprise Server and BlackBerry Enterprise Server components support the following virtual environments: • VMware® ESX Server version 2.5.2 or later • VMware ESX Server version 3.0.0, 3.0.1, 3.0.2, or 3.5
enhanced network authentication	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components support RSA® Authentication Agent version 5.0 for Windows®.
multiple IBM® Lotus® Domino® domains	The BlackBerry Messaging Agent supports multiple IBM Lotus Domino domains with the following conditions: • the IBM Lotus Domino server configured on the BlackBerry Enterprise Server computer with the Connection documents for the other IBM Lotus Domino servers in the domains that the server replicates from, and membership in the LocalDomainServers group in all the domains in your organization's environment

Item	Description
	• cross-certification established between the messaging servers and directory servers in other domains
SNMP monitoring	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components support the SNMP service.
remote access	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components support remote access by administrators who use Remote Desktop Connection.

Unsupported environments

Item	Description
DMZ	The BlackBerry® Enterprise Server and BlackBerry Enterprise Server components, with the exception of the BlackBerry Router, do not support installation in a DMZ.
email application	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components do not support the installation of email applications on the same computer.
IBM® DB2® UDB	The BlackBerry Enterprise Server version 5.0 and BlackBerry Enterprise Server components do not support IBM DB2 UDB. Support for IBM DB2 UDB is planned for a future release.
instant messaging server	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components do not support more than one type of instant messaging server in the BlackBerry Domain. For example, you cannot install the BlackBerry Collaboration Service for use with Microsoft® Office Communications Server 2007 and the BlackBerry Collaboration Service for IBM® Lotus® Sametime® in the same BlackBerry Domain.
BlackBerry database notification system	The BlackBerry database notification system does not support installation on a computer that runs Windows Server® 2008.

Preupgrade tasks

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Configuring a messaging environment

Configure a group for the BlackBerry Enterprise Server

You must configure a group named BlackBerryAdmins in your organization's messaging environment. The BlackBerryAdmins group includes permissions that the BlackBerry® Enterprise Server can use to access specific databases. You can administer the BlackBerry Enterprise Server and the BlackBerry Administration Service only with the groups and user accounts that you include in the BlackBerryAdmins group.

Before you begin: Verify that the LocalDomainServers group includes the computer you want to install the BlackBerry Enterprise Server on.

1. On a computer that hosts the IBM® Lotus® Domino® administration console, in the administration server directory, create an IBM Lotus Domino group with the following attributes:
   - **Name**: BlackBerryAdmins
   - **Group type**: Access Control List only
   - **Description**: Users who can add, delete, and change settings for BlackBerry device users
   - **Members**: LocalDomainServers, any groups or users who might administer the BlackBerry Enterprise Server
2. On the server that you want to install the BlackBerry Enterprise Server on, replicate the BlackBerryAdmins group in the IBM Lotus Domino Directory.

Configure the Server document to permit the BlackBerry Enterprise Server to move user accounts within a BlackBerry Domain

You must configure the Server document so that you can move user accounts between BlackBerry® Enterprise Server instances in your organization's BlackBerry Domain.

1. On a computer that hosts the IBM® Lotus® Domino® administration console, open the Server document for the IBM Lotus Domino server that you want to install the BlackBerry Enterprise Server on.
2. In the **Run unrestricted methods and operations** field, add the **LocalDomainServers** group.

Configuring connections for the BlackBerry Enterprise Server databases

The BlackBerry® Enterprise Server, BlackBerry Monitoring Service, and BlackBerry MDS Integration Service store data in their own databases. The database for the BlackBerry Enterprise Server is named the BlackBerry Configuration Database.

You can create the BlackBerry Configuration Database by installing a BlackBerry Enterprise Server instance or BlackBerry Administration Service instance, or by running the CreateDB executable. You can create the BlackBerry MDS Integration Service database or BlackBerry Monitoring Service database during the installation processes for the BlackBerry MDS Integration Service or BlackBerry Monitoring Service respectively.

The BlackBerry Enterprise Server, BlackBerry Monitoring Service, and BlackBerry MDS Integration Service can connect to the databases on the Microsoft® SQL Server® using Windows® authentication or database authentication. By default, the BlackBerry Enterprise Server, BlackBerry Monitoring Service, and BlackBerry MDS Integration Service log in to the databases using the Windows account that you use to complete the installation process, or the database credentials you provided during the installation process.

To support Microsoft SQL Server 2005 database mirroring with the BlackBerry Configuration Database or BlackBerry MDS Integration Service database, you must use Windows authentication. The BlackBerry Monitoring Service does not support database mirroring.

Specifying permissions when connecting to the BlackBerry Enterprise Server databases using Windows authentication

During the installation process, if you connect the BlackBerry® Enterprise Server, BlackBerry MDS Integration Service, and BlackBerry Monitoring Service to the BlackBerry® Enterprise Server databases using Windows® authentication, the Windows account that you specify must have database permissions on the database server. The type of permissions depends on the setup option that you select, and whether you create the BlackBerry Enterprise Server databases on the same computer as the BlackBerry Enterprise Server components or on another database server.

Specifying Microsoft SQL Server 2005 Express permissions for the Windows account

If you install Microsoft® SQL Server® 2005 Express during the BlackBerry® Enterprise Server installation process, you do not need to specify additional permissions. When you select Windows® authentication during the BlackBerry Enterprise Server installation process, the setup application automatically assigns the required permissions to the Windows account that you use to complete the installation process.

Assign Microsoft SQL Server permissions to the Windows account

Perform one of the following actions:

- If you create the BlackBerry® Enterprise Server databases on the same computer as the BlackBerry Enterprise Server and require the setup application to install Microsoft® SQL Server® Express during the installation process, you do not need to assign Microsoft SQL Server permissions to the Windows® account . If you want the setup application to install the BlackBerry database notification system, assign the system administrator permission to the Windows account.

- If you create the BlackBerry Enterprise Server databases on the same computer as the BlackBerry Enterprise Server and the computer already hosts a Microsoft SQL Server, assign the database creator permission to the Windows account that you use to complete the BlackBerry Enterprise Server installation process. If you want the setup application to install the BlackBerry database notification system, also assign the system administrator permission to the Windows account.
- If you create the BlackBerry Enterprise Server databases on another computer, assign the database creator permission to the Windows account that you want to use to complete the BlackBerry Enterprise Server installation process.

Configuring authentication to the BlackBerry MDS Integration Service database

When the setup application creates the BlackBerry® MDS Integration Service database during the installation process, you must use the same authentication method and account that you specified for the BlackBerry Configuration Database. The BlackBerry MDS Integration Service requires the same permissions to access the BlackBerry MDS Integration Service database that the BlackBerry® Enterprise Server requires to access the BlackBerry Configuration Database.

Configuring the local system account in an IBM Lotus Domino environment

Add Windows credentials to the the local system account

You can configure the local system account to access the BlackBerry® Enterprise Server, install the BlackBerry Configuration Database on a computer that is separate from computer that hosts the BlackBerry Enterprise Server, and use Windows® authentication to connect to the BlackBerry Configuration Database.

In the Microsoft® SQL Server® Enterprise Manager or Microsoft SQL Server Management Studio, create a new user account with the following properties:

- user name that is the same as the name of the BlackBerry Enterprise Server computer, and uses the format <*Domain*>\<*computer_name*>$
- authentication configured to Windows authentication
- roles assigned that are required to change the BlackBerry Configuration Database

Add database credentials to the local system account

You can add the user name and password for the database account to the Windows® registry if you want to use a local system account for the BlackBerry® Enterprise Server, install the BlackBerry Configuration Database on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server, and use database authentication to connect to the BlackBerry Configuration Database.

1. On the computer that you want to install the BlackBerry® Enterprise Server software on, on the **Start** menu, click **Run**.
2. Type **regedit**.
3. Click **OK**.
4. In HKEY_USERS\.DEFAULT\Software\Research In Motion\BlackBerry Enterprise Server\Database, create the following string values for a database account that has the required permissions:
   - **Login**

- **Password**

Resolving IT policy and application control policy conflicts in a mixed version environment

In BlackBerry® Enterprise Server versions earlier than version 5.0, the BlackBerry Policy Service queues delivery requests for IT policies and application control policies and sends them to BlackBerry devices. In BlackBerry Enterprise Server version 5.0, the BlackBerry Administration Service queues the IT policies and application control policies, and the BlackBerry Policy Service sends them to BlackBerry devices.

To avoid conflicts between the BlackBerry Policy Service and BlackBerry Administration Service in a mixed version environment, the setup application tries to turn off application polling by the BlackBerry Policy Service for each BlackBerry Enterprise Server instance in the BlackBerry Domain before it starts the upgrade process. When the setup application turns off application polling, it prevents earlier versions of the BlackBerry Policy Service from queuing delivery requests for IT policies and application control policies.

If the setup application cannot turn off application polling for all BlackBerry Enterprise Server instances (for example, a computer that hosts one of the BlackBerry Enterprise Server instances is not running), you must run the BB50UpgradePrep tool manually before you can upgrade the BlackBerry Enterprise Server.

Resolve IT policy and application control policy conflicts in a mixed version environment

1. Copy the BlackBerry® Enterprise Server installation media to the computer that hosts a BlackBerry Enterprise Server.
2. Extract the contents to a folder on the computer.
3. In the *<extracted_folder>*\tools folder, double-click **BB50UpgradePrep.exe**.
4. Complete the instructions on the screen.

Backing up the BlackBerry Configuration Database

You must back up the BlackBerry® Configuration Database so that you can restore it if the BlackBerry® Enterprise Server upgrade process does not complete.

If your organization's environment includes Microsoft® SQL Server®, use the backup and restore tools that Microsoft provides to back up the BlackBerry Configuration Database.

If your organization's environment includes an MSDE 2000 or Microsoft SQL Server Express, you can use the BlackBerry Configuration Database Backup Tool that is included with the BlackBerry Enterprise Server installation media to back up the BlackBerry Configuration Database to a file. By default, the backup file is named *<database_name><YYYYMMDDHHMMSS>*.bak.

Back up the BlackBerry Configuration Database

1. Copy the BlackBerry® Enterprise Server installation media to the database server that hosts the BlackBerry Configuration Database.
2. Extract the contents of the installation media to a folder on the computer.
3. At the command prompt, navigate to the **Tools** folder in the BlackBerry Enterprise Server installation media.
4. Run **BlackBerryDbBackup.exe**.

Example

To back up a BlackBerry Configuration Database that is named BESMgmt to a folder that is named DB_backup_folder, when you use the database credentials sqlusername and sqlpassword, type

BlackBerryDBBackup.exe -d BESMgmt -f C:\DB_backup_folder -U sqlusername -P sqlpassword.

BlackBerry Configuration Database Backup Tool parameters

The parameters listed in brackets are optional.

Parameter	Description
-d <*database _name*>	This parameter specifies the name of the BlackBerry® Configuration Database (for example, BESMgmt).
[-f] <*folder*>	This parameter specifies the folder that you want to save the backup file in. If you specify a folder, it must already exist. The default folder is the current folder location.
[-S] <*database_server*>	This parameter specifies the name of the database server that hosts the BlackBerry Configuration Database.
[-E]	This parameter specifies that you want to use Windows® authentication instead of database authentication to connect to the database server. Your login account must have the database owner permission. The default value is false (Windows authentication).
[-U] <*user_name*>	This parameter specifies the user name that you use for database authentication. To use a login account that is different from the default login account, the account must have database owner permission.

Parameter	Description
	The default user name is sa.
[-P] <*password*>	This parameter specifies the password that you use for for database authentication.
[-p] <*percentage*>	This parameter specifies the interval, as a percentage, that you want the BlackBerry Configuration Database Backup Tool to report progress at. The default percentage is 10.
[-?]	This parameter specifies information about the BlackBerry Configuration Database Backup Tool. You do not require any other parameters when you use this parameter.

Configuring the LDAP information for the BlackBerry Administration Service

The BlackBerry® Administration Service requires access to the LDAP server so that the BlackBerry Administration Service can read user information in Microsoft® Active Directory® when it authenticates the BlackBerry® Web Desktop Manager users. To access the LDAP server, the BlackBerry Administration Service requires the URL of the LDAP server, the search base to find where the user accounts are stored, and the administrator's LDAP credentials.

During the installation process and upgrade process, the setup application populates the LDAP information automatically. You must verify this information to ensure that it reflects the requirements of the BlackBerry Administration Service.

Configure permissions for the administrator account on the LDAP server that the BlackBerry Administration Service uses

To authenticate a user account, you must configure permissions for an adminstrator account on the LDAP server so that the BlackBerry® Administration Service can read LDAP attributes in the Microsoft® Active Directory®.

Before you begin: Create an administrator account for the BlackBerry Administration Service.

1. In Microsoft Active Directory, in the search base container and all subcontainers that user accounts are located in, add the following permissions to the administrator account:
   - for containers, the List Contents permission
   - for user objects, the Read All Properties permission
2. Configure the administrator account so that the account has the correct permission to read the attributes of the crossRef objects that represent domains in the Partitions container of the Microsoft Active Directory configuration partition.

Find the LDAP information that the BlackBerry Administration Service requires

You can use the ldp support tool to access the domain controller in your organization's environment and locate the LDAP information before you install the BlackBerry® Administration Service.

Before you begin:

- Verify that you have a domain administrator account.
- Download and install the Windows® support tools. For more information about installing the support tools, visit www.microsoft.com to read articles 892777 and 301423.

1. On the **Start** menu, click **Run**.
2. Type **ldp**.
3. Click **OK**.
4. On the **Connection** menu, click **Connect**.
5. Connect to the domain controller.
6. To set the LDAP search base to the BaseDN and permit the BlackBerry Administration Service to search the entire directory tree for user accounts, perform the following actions:
   a. In the **ldp** window, on the **View** menu, click **Tree**.
   b. In the drop-down list, select the first option.
   c. Copy the BaseDN to a text file (for example, DC=yourDepartment,DC=yourCompany,DC=net).
7. To permit the BlackBerry Administration Service to access only the part of the directory tree that includes present and prospective BlackBerry device users, specify a specific area in the directory tree as the LDAP search base (for example, OU=Users,DC=yourDepartment,DC=yourCompany,DC=net).
8. To locate the administrator account information, in the Microsoft® Active Directory® Users and Computers console, find the user logon name for the administrator account. If you use Windows Server® 2003, verify that the administrator account has a password.
9. Transfer the text file to the computer that you want to install the BlackBerry Administration Service on.

Configure the BlackBerry Administration Service to authenticate user accounts from multiple Microsoft Active Directory domains

During the installation process, the setup application prompts you to specify the LDAP server URL, search base, and the credentials for an LDAP administrator so that the BlackBerry® Administration Service can access the LDAP server and authenticate user accounts.

If the user accounts in your organization's environment are stored in more than one domain in a Microsoft® Active Directory® forest, you must configure the LDAP settings that the BlackBerry Administration Service uses so that the BlackBerry Administration Service can search the global catalog.

1. During the installation process, specify the DNS host name of a global catalog server as the LDAP server name that is included in the LDAP server URL.
2. Specify the LDAP port number to be 3268.
3. Specify the LDAP user name and password to be the user name and password of an administrator account that has permission to read user attributes from the global catalog.

Migrating BlackBerry MDS Runtime Applications

Previous versions of the BlackBerry® MDS Integration Service used a BlackBerry MDS Integration Service database (mdss), and a BlackBerry MDS Integration Service discovery database (mdss_dis) to store BlackBerry® MDS Runtime Applications and application data. The latest BlackBerry MDS Integration Service version does not use a BlackBerry MDS Integration Service discovery database. During the upgrade process, the setup application merges all tables of the BlackBerry MDS Integration Service discovery database into the BlackBerry MDS Integration Service database. As a result, the upgrade process does not migrate all published BlackBerry MDS Integration Service applications such as BlackBerry MDS Runtime Applications.

To migrate BlackBerry MDS Runtime Applications, you must republish the BlackBerry MDS Runtime Applications to the BlackBerry MDS Application Repository after the upgrade process completes, or you must migrate the BlackBerry MDS Integration Service discovery database to the BlackBerry MDS Integration Service version 4.1 database before you start the upgrade process. If you migrate the BlackBerry MDS Integration Service discovery database and install new BlackBerry MDS Integration Service instances instead of upgrading the existing BlackBerry MDS Integration Service instances, you must reconfigure any backend notification subscriptions. If you migrate the BlackBerry MDS Integration Service discovery database, BlackBerry devices that are running BlackBerry® MDS Runtime versions earlier than version 4.5 remove the applications that are installed.

Migrate data from the BlackBerry MDS Integration Service discovery database to the BlackBerry MDS Integration Service database

1. Open the Microsoft® SQL Server® console.
2. Generate scripts for the following tables in the BlackBerry® MDS Integration Service discovery database:
   - REGISTRY_APP
   - REGISTRY_APP_LOCALE
   - REGISTRY_APP_KEYWORD
   - REGISTRY_APP_DEPEND
3. To create the tables in the BlackBerry MDS Integration Service database, execute the generated scripts against the BlackBerry MDS Integration Service database.
4. Export data from the tables that are listed in step 2.

5. Import the data into the BlackBerry MDS Integration Service database.

After you finish: To migrate user accounts to the BlackBerry MDS Integration Service pool after you complete the upgrade process, use the BlackBerry Administration Service to update the BlackBerry® Enterprise Server to use the new BlackBerry MDS Integration Service pool.

Install the SNMP service for monitoring by the BlackBerry Monitoring Service

To permit the BlackBerry® Monitoring Service to monitor the BlackBerry® Enterprise Server activity, you must install the SNMP service on the computer that you want to install the BlackBerry Enterprise Server on.

Before you begin: Verify that the computer has access to the Windows® installation media.

1. On the taskbar, click **Start > Settings > Control Panel > Add/Remove Programs > Add/Remove Windows Components**.
2. Double-click **Management and Monitoring Tools**.
3. Select the **Simple Network Management Protocol** check box.
4. Click **OK**.
5. When prompted, install the files from the Windows installation media.
6. Complete the installation wizard.
7. In the Windows Services, verify that the SNMP service is running.

After you finish: To complete the SNMP service installation process, after you install the BlackBerry Enterprise Server or BlackBerry Enterprise Server components, configure the SNMP service to monitor the activity of the BlackBerry Enterprise Server or BlackBerry Enterprise Server components.

Creating a BlackBerry Administration Service pool using DNS round robin that includes the BlackBerry Web Desktop Manager

When you install a BlackBerry® Administration Service, you install the BlackBerry Administration Service services automatically, and you can choose to install the BlackBerry Administration Service console, BlackBerry® Web Desktop Manager, or both. The BlackBerry Administration Service console and BlackBerry Web Desktop Manager require the BlackBerry Administration Service services so that they can run.

If you create a BlackBerry Administration Service pool using DNS round robin, you can install the BlackBerry Administration Service console and BlackBerry Web Desktop Manager on each computer in the pool, or you can install the BlackBerry Administration Service console or BlackBerry Web Desktop Manager on some of the computers in the pool. If you install the BlackBerry Administration Service console and BlackBerry Web Desktop Manager on each computer in the pool, you can use the

pool name that you specified during the installation process in the URLs for the BlackBerry Administration Service console and BlackBerry Web Desktop Manager (for example, https://<*pool_name*>/webconsole/login or https://<*pool_name*>/webdesktop/login).

If you do not install both components on each computer in the pool, and you try to access one of the URLs using the pool name, the web browser might display an HTTP 404 error message if it tries to connect to a computer in the pool that you did not install the component on that you are trying to access. For example, you can install the BlackBerry Administration Service console on two of the computers in the pool, and the BlackBerry Web Desktop Manager on two different computers in the pool, and the HTTP 404 error message might occur when you use the pool name in the URLs.

To make sure that the web browser does not display HTTP 404 error messages, you can choose one of the following options:

- You can create separate pools within the BlackBerry Administration Service pool for the BlackBerry Administration Service console and the BlackBerry Web Desktop Manager. These pools contain a subset of the BlackBerry Administration Service instances that exist in the BlackBerry Administration Service pool. You can provide your organization's administrators and users with URLs that include the specific pool names.
- You can provide administrators and users in your organization's environment with URLs that include the FQDNs of the computers that you installed the BlackBerry Administration Service console or BlackBerry Web Desktop Manager on (for example, https://<*FQDN_of_computer*>/webconsole/login or https://<*FQDN_of_computer*>/webdesktop/login).

Creating a BlackBerry MDS Integration Service pool

You can create a BlackBerry® MDS Integration Service pool using the setup application during the installation processes for the BlackBerry MDS Integration Service instances that you want to include in the pool. During the installation process for the first BlackBerry MDS Integration Service instance, you must type a unique FQDN or DNS name that identifies the pool. During the installation processes for the subsequent BlackBerry MDS Integration Service instances, you must select the existing pool name from the list so that you can add the instances to the pool. After you complete the installation processes, BlackBerry MDS Integration Service clients can access the BlackBerry MDS Integration Service instances in the pool using the unique DNS name.

Create the DNS record for a BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance

To configure multiple BlackBerry® Administration Service instances or BlackBerry MDS Integration Service instances for high availability using DNS round robin, you must create a DNS record. The DNS record permits the clients of the BlackBerry Administration Service pool or BlackBerry MDS Integration Service pool to access the instances using a single DNS name. You must create the DNS record in the same domain as the computers that host the BlackBerry Administration Service instances or BlackBerry MDS Integration Service instances.

Before you begin:

- You must configure a static IP address for each computer that you want to install a BlackBerry MDS Integration Service instance or BlackBerry Administration Service instance on.

- You must have permission to manage the DNS.
- If you configure DNS round robin, you must configure clients to resolve the DNS name into a list of IP addresses and distribute traffic equally across the BlackBerry Administration Service or BlackBerry MDS Integration Service instances in the pool.

1. Log in to the DNS server.
2. In the DNS management console, access the forward lookup zone that you want to add the BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance to.
3. To create a new host, type the following information:
   - In the **Name** field, type the name of the BlackBerry Administration Service pool or BlackBerry MDS Integration Service pool that you want to use.
   - In the **IP Address1** field, type the IP address of the computer that you want to host a BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance on.
   - Select the **Create associated pointer (PTR) record** check box.
4. Repeat step 3 for each BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance that you want to install. When you add entries to the same pool, you must use the same pool name for all BlackBerry Administration Service instances or BlackBerry MDS Integration Service instances.

After you finish: To remove a BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance from a pool, delete the entry for the IP address of the BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance from the DNS server.

Configuring the setup application to use a non-default static port number for the database server

If the Microsoft® SQL Server® in your organization's environment does not use the default static port number (port 1433), the BlackBerry® Enterprise Server setup application cannot connect to the database server. Before you run the setup application, you must create an alias to the database server that specifies the port number that the database server is using. To configure an alias, you can use Microsoft SQL Server Configuration Manager or the cliconfg.exe tool. You can configure the name of the alias so that it is the same name as the Microsoft SQL Server. You must use the cliconfg.exe tool if the database server is Microsoft SQL Server 2000.

Create an alias to the database server using the Microsoft SQL Server Configuration Manager

Before you begin: Verify that you installed the client components of the Microsoft® SQL Server® on the computer.

1. On the computer that you want to install a BlackBerry® Enterprise Server on, click **Start > All Programs > Microsoft SQL Server 2005 > Configuration Tools > SQL Server Configuration Manager**.

2. Expand **SQL Native Client Configuration**.
3. Right-click **Aliases**. Click **New Alias**.
4. In the **Alias Name** field, type the database server name.
5. In the **Port No** field, type the static port number.
6. In the **Protocol** drop-down list, click **TCP/IP**.
7. In the **Server** field, type the database server name.
8. Click **OK**.

Create an alias to the database server using the cliconfg.exe tool

1. On the computer that you want to install a BlackBerry® Enterprise Server on, click **Start > Run**.
2. Type **cliconfg.exe**.
3. Click **OK**.
4. On the **Alias** tab, click **Add**.
5. In the **Server alias** field, type the database server name.
6. In **Network libraries**, select **TCP/IP**.
7. In the **Connection Parameters, Server name** field, type the database server name.
8. Clear the **Dynamically determine port** check box.
9. In the **Port number** field, type the port number.
10. Click **OK**.

Applications that are installed with the BlackBerry Enterprise Server components

The BlackBerry® Enterprise Server installation process can include the installation of third-party applications.

Application	BlackBerry Enterprise Server components that the application is installed with
JDK with JRE™ version 1.5.15	• BlackBerry Administration Service • BlackBerry MDS Integration Service • BlackBerry Monitoring Service
JDK with JRE version 1.6.05	• BlackBerry Collaboration Service • BlackBerry MDS Connection Service

Application	BlackBerry Enterprise Server components that the application is installed with
Microsoft® XML Parser version 6.0.1	all components except the BlackBerry Router
Microsoft® SQL Server® Express 2005 (if selected)	• BlackBerry Administration Service • BlackBerry Enterprise Server • BlackBerry MDS Integration Service • BlackBerry Monitoring Service
Microsoft® .NET Framework version 2.0 (if you are installing Microsoft SQL Server Express)	• BlackBerry Administration Service • BlackBerry Enterprise Server • BlackBerry MDS Integration Service • BlackBerry Monitoring Service

Prerequisites: Upgrading the BlackBerry Enterprise Server software

- Verify that the Windows® that you want to use to install the BlackBerry® Enterprise Server software is assigned the required permissions to complete the installation process.
- Delete inactive user accounts, including their old state databases, from the BlackBerry Enterprise Server.
- Obtain the following information:
  - BlackBerry® Client Access License key
  - SRP host
  - SRP identifier
  - SRP key
  - computer name and port number of the instant messaging server (use the virtual server name and port number where the AJAX Service is installed, if applicable)
  - computer name and port number of the proxy server (optional)
- If you are upgrading from the BlackBerry Enterprise Server Small Business Edition or BlackBerry® Professional Software to a BlackBerry Enterprise Server, obtain a new BlackBerry CAL key. For more information, visit www.blackberry.com/support to read article KB03535.
- Upgrade all BlackBerry Enterprise Server instances to version 4.0 SP7, 4.1 SP3, or later.
- Back up the BlackBerry Enterprise Server databases.
- If you configured database replication for the BlackBerry Configuration Database, turn database replication off.
- If you installed the BlackBerry database notification system on a remote Microsoft® SQL Server®, upgrade it manually.
- If you are upgrading from a 5.0 Beta version and the BlackBerry Administration Service is installed on another computer, in the Windows® Services, stop the BlackBerry Administration Service - Application Servers and the BlackBerry Administration Service - Native Code Containers services.

Upgrading the BlackBerry Enterprise Server software by using the in-place upgrade process 6

Using the in-place upgrade process, you can upgrade the BlackBerry® Enterprise Server software by replacing the existing version and upgrading the BlackBerry Configuration Database.

You can use the in-place upgrade process if your organization's environment includes a standalone BlackBerry Enterprise Server instance.

When you use the in-place upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.1 or later receive new service books and data synchronization occurs over the wireless network.

Avantages of this upgrade process include:

- You do not require an extra computer to perform this upgrade.
- When the upgrade process completes, user accounts are active and no additional administrative action is required.

Disadvantages of this upgrade process include:

- After you upgrade the BlackBerry Enterprise Server, you cannot return to an earlier version of the software automatically.
- You must turn off the BlackBerry Enterprise Server during the upgrade process. The interruption to services for BlackBerry devices lasts for as long as it takes the upgrade process to complete.

Upgrade the BlackBerry Enterprise Server software by overwriting the existing version and use the existing BlackBerry Configuration Database

The in-place upgrade process requires that you restart the computer.

Before you begin:

- Instruct your organization's administrators to stop managing the BlackBerry® Enterprise Server using the BlackBerry Manager or administration clients that use the BlackBerry® Enterprise Server Resource Kit.
- If a remote Microsoft® SQL Server® hosts the BlackBerry Configuration Database, upgrade the BlackBerry database notification system.

1. Log in to the computer using the Windows® account that the BlackBerry Enterprise Server services run on.
2. Stop the IBM® Lotus® Domino® server.
3. In the Windows Services, change the startup type of the IBM Lotus Domino server to manual.
4. Double-click **setup.exe**.
5. In the **Setup type** dialog box, select **I would like the installation process to use an existing BlackBerry Configuration Database**.

6. In the **Database information** dialog box, verify the names of the database server and existing BlackBerry Configuration Database.
7. In the **Advanced database options** dialog box, consider the following information:
   - If you configured database mirroring, you can select **Add support for database mirroring** and type the name of the database server that hosts the mirror database in the **Name of the mirror database server** field. The setup application does not create the BlackBerry Configuration Database on the mirror Microsoft® SQL Server®; it adds a registry key that contains the name of the mirror Microsoft SQL Server.
   - If you configured the database server to use static ports, you must clear the **Use dynamic ports** check box. If the static port number is not 1433, type the port number in the **Port** field.
8. In the **Setup options** dialog box, consider the following information:
   - For the first upgrade, to install the BlackBerry Administration Service, under **Additional Components**, select **BlackBerry Administration Service**.
   - To permit administrators to log in to the BlackBerry Administration Service and BlackBerry Monitoring Service using their Microsoft® Active Directory® credentials, in the **BlackBerry administration** list, click **Use Active Directory authentication**.
9. When prompted to restart the computer, click **Yes**.
10. Log in to the computer using the same account that you used in step 1.
11. In the **Application extensibility information** dialog box, consider the following information:
    - You can type a FQDN to create a new BlackBerry MDS Integration Service pool.
    - To configure a hardware load-balancer for the BlackBerry MDS Integration Service pool, you can type a FQDN that corresponds to a DNS record in the DNS server that maps the FQDN into the IP address of the virtual server that you configured on the hardware load-balancer.
    - If you choose to create a new BlackBerry MDS Integration Service database, the setup application creates the BlackBerry MDS Integration Service database on the same database server as the BlackBerry Configuration Database.
12. If you upgrade from the BlackBerry Collaboration Service for use with Windows® Messenger, in the **Instant messaging settings** dialog box, type the Microsoft® Office Live Communications Server 2005 address.
13. In the **Administration settings** dialog box, consider the following information:
    - You must type a valid FQDN or IP address in the **Pool name** field. The setup application uses the FQDN or IP address to create the web address for the BlackBerry Administration Service.
    - You must type the password for the SSL certificate that the BlackBerry Administration Service uses for authentication with browsers.
14. In the **LDAP settings** dialog box, consider the following information:
    - You can type the URL of the LDAP server that hosts the BlackBerry device users using the following format: ldap://<*computer_name*>:<*port*>, where <*computer_name*> is the DNS name of the LDAP server, and <*port*> is the port number that the LDAP server listens for connections on (by default, port 389).
    - You can type the distinguished name of the search base URL for the area of the directory tree that contains the BlackBerry device users.

- You can type the name and password for the administrator account that has permissions to log in to and search the LDAP server. You can type the name for the administrator account as the login name, also known as the security account manager name (for example, besadmin).

15. In the **DIIOP settings** dialog box perform the following actions:
    - In the **FQDN** field, type the FQDN of the IBM Lotus Domino server that is running the DIIOP task, or if you want to configure high availability for the DIIOP task, the FQDN of a hardware load balancer entry or software load balancer entry.
    - In the **Port number** field, type the TCP/IP port number for the DIIOP task (by default, 63148).
16. Start the services for the BlackBerry Enterprise Server. If you installed the BlackBerry Administration Service, the setup application waits until the services for the BlackBerry Administration Service are running before the setup application continues.
17. In the **Console addresses** dialog box, copy the web addresses for the BlackBerry Enterprise Server components. You can use the web addresses to log in to the BlackBerry Enterprise Server components that you installed.

After you finish: As required, add the name of the BlackBerry MDS Integration Service pool to the DNS server and change the name of the computer.

Specifying a name for the BlackBerry Administration Service pool during the installation process

During the installation process, the setup application prompts you to specify the name of the BlackBerry® Administration Service pool.

The BlackBerry Administration Service instances use the pool name for interprocess communication and when you configure BlackBerry Administration Service high availability using DNS round robin. You must specify a valid DNS host name during the installation process, even if you do not configure BlackBerry Administration Service high availability using DNS round robin.

The setup application uses the FQDN of the computer that you install the first BlackBerry Administration Service instance on as the default value for the pool name. If you keep the default value and configure BlackBerry Administration Service high availability using DNS round robin at a later time, you must use the BlackBerry Configuration Panel to change the pool name to the host name for the pool.

The name for the BlackBerry Administration Service pool does not impact BlackBerry Administration Service high availability that uses a hardware load balancer.

For more information about BlackBerry Administration Service high availability, see the *BlackBerry Enterprise Server Planning Guide*.

Upgrade the BlackBerry Enterprise Server instances that you configured for disaster recovery

If you configured the BlackBerry® Enterprise Server instances in your organization's environment for disaster recovery, you configured two BlackBerry Enterprise Server instances that use the same SRP address. You can upgrade the BlackBerry Enterprise Server instances to the latest BlackBerry Enterprise Server version and configure high availability so that the BlackBerry Enterprise Server instances can fail over automatically.

1. Upgrade the standby BlackBerry Enterprise Server using the in-place upgrade process. During the upgrade process, do not verify the SRP credentials or start the BlackBerry Enterprise Server services so that you do not deactivate the SRP credentials.
2. Stop BlackBerry Enterprise Server version 4.1 so that you can start a manual failover process.
3. Start the latest BlackBerry Enterprise Server version so that it becomes the primary instance.
4. Verify that users can send and receive messages on their BlackBerry devices.
5. Upgrade the earlier BlackBerry Enterprise Server version using the in-place upgrade process. During the upgrade process, specify that this BlackBerry Enterprise Server instance is a standby BlackBerry Enterprise Server, and associate it with the BlackBerry Enterprise Server instance that you upgraded in step 1.
6. Using the BlackBerry Administration Service, fail over to the BlackBerry Enterprise Server manually that you want to use as the primary instance.
7. Configure the automatic failover feature.

After you finish: For more information, see the *BlackBerry Enterprise Server Installation Guide* and the *BlackBerry Enterprise Server Administration Guide*.

7 Upgrading the BlackBerry Enterprise Server using the cutover upgrade process and upgrade the existing BlackBerry Configuration Database

Using the cutover upgrade process, you can install a BlackBerry® Enterprise Server on a new computer and move user accounts and server information from a previous BlackBerry Enterprise Server to the new one.

When you use the cutover upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.1 or later receive new service books and data synchronization occurs over the wireless network.

If you upgrade the existing BlackBerry Configuration Database, you can move user accounts from the previous BlackBerry Enterprise Server to the new one using the BlackBerry Administration Service.

Advantages of this upgrade process include:

- You can move user accounts back to the previous BlackBerry Enterprise Server if you experience issues with the new one.
- You can upgrade server hardware.
- Users experience minimal service interruptions because user accounts remain active on the previous BlackBerry Enterprise Server until you start the new one.

Disadvantages of this upgrade process include:

- You require an extra computer.
- The BlackBerry Enterprise Server sends new service books to all of the BlackBerry devices that are capable of synchronizing data over the wireless network.

Upgrade a BlackBerry Configuration Database

If you are not a database administrator and you do not have permissions to modify the BlackBerry® Configuration Database, you can request that a database administrator with the appropriate permissions upgrades the BlackBerry Configuration Database before you run the setup application and upgrade the BlackBerry® Enterprise Server.

Before you begin: Verify that you configured the proper permissions on the database server.

1. Log in to the computer that hosts the database server as a local administrator or using a Windows® account that has SQL administrator permissions.
2. Copy the BlackBerry Enterprise Server installation media to the database server that hosts the BlackBerry Configuration Database.
3. Extract the contents to a folder on the computer.
4. Navigate to *<extracted_folder>*\Database.

5. Open the BesMgmt.cfg file in a text editor.
6. Change the file to include information that is specific to your organization's environment.
7. Save and close the file.
8. Open a command prompt window.
9. Navigate to *<extracted_folder>*\Database.
10. Type **CreateDB.exe BESMgmt.cfg**.

BESMgmt.cfg properties

Property	Description
DATABASE_NAME	This property specifies the name of the BlackBerry® Configuration Database.
CMD	This property specifies the type of action that the CreateDB executable must complete (for example, whether to install or upgrade the BlackBerry Configuration Database).
USERID	If you use database authentication, this property specifies the user name of the database account that has server administrator permission and database creator permission.
PASSWORD	If you use database authentication, this property specifies the password for the database account.
SCRIPT_ROOT	This property specifies the path to the DBInstallScripts folder. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
LOG_DIR	This property specifies the path to the folder that you want to create log files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
DBMS	This property specifies the database management system that your organization uses.
DB_FILE_DIR	This property specifies an existing folder that you want to save the database files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
BACKUP_DIR	This property specifies an existing folder where you want to save the database backup in.

Property	Description
	By default, this folder is located in the same root folder that the CreateDB.exe file is located in.

Install the BlackBerry Enterprise Server on the new computer and upgrade the existing BlackBerry Configuration Database

To administer the BlackBerry® Enterprise Server, you must install the BlackBerry Administration Service. You can install the BlackBerry Administration Service on the same computer as the BlackBerry Enterprise Server or on a separate computer. The first BlackBerry Administration Service or BlackBerry Enterprise Server that you install creates and populates the BlackBerry Configuration Database, if you did not create the BlackBerry Configuration Database previously using the SQL scripts.

During the installation process, you must restart the computer.

1. Log in to the computer using the Windows® account that you want the BlackBerry Enterprise Server services to run on.
2. Stop the IBM® Lotus® Domino® server.
3. In the Windows Services, change the startup type of the IBM Lotus Domino server to manual.
4. Double-click **setup.exe**.
5. In the **Setup type** dialog box, select **I would like the installation process to use an existing BlackBerry Configuration Database**.
6. In the **Database information** dialog box, verify the names of the database server and existing BlackBerry Configuration Database.
7. In the **Advanced database options** dialog box, consider the following information:
   - If you want to configure database mirroring, you can select **Add support for database mirroring** and type the name of the database server that hosts the mirror database in the **Name of the mirror database server** field. The setup application does not create the BlackBerry Configuration Database on the mirror Microsoft® SQL Server®; it adds a registry key to the computer that includes the name of the mirror Microsoft SQL Server.
   - If you configured the database server to use static ports, you must clear the **Use dynamic ports** check box. If the static port number is not 1433, type the port number in the **Port** field.
8. In the **Setup options** dialog box, consider the following information:
   - For the first upgrade, to install the BlackBerry Administration Service, select **BlackBerry Administration Service** under **Additional Components**.
   - To install the BlackBerry Administration Service by itself, select **Remote component** and **BlackBerry Administration Service**.
   - To permit administrators to log in to the BlackBerry Administration Service and BlackBerry Monitoring Service using their Microsoft® Active Directory® credentials, in the **BlackBerry administration** list, click **Use Active Directory authentication**.

9. When prompted to restart the computer, click **Yes**.
10. Log in to the computer using the same account that you used in step 1.
11. In the **CAL and SRP Information** dialog box, type the SRP credentials that the BlackBerry Enterprise Server that you are replacing uses.
12. In the **Application extensibility information** dialog box, consider the following information:
    - You can type a FQDN to create a new BlackBerry MDS Integration Service pool.
    - To configure a hardware load-balancer for the BlackBerry MDS Integration Service pool, you can type a FQDN that corresponds to a DNS record in the DNS server that maps the FQDN into the IP address of the virtual server that you configured on the hardware load-balancer.
    - You can create a new BlackBerry MDS Integration Service database or upgrade the existing BlackBerry MDS Integration Service database.
    - If you choose to create a new BlackBerry MDS Integration Service database, the setup application creates the BlackBerry MDS Integration Service database on the same database server as the BlackBerry Configuration Database.
13. If you upgrade from the BlackBerry Collaboration Service for use with Windows® Messenger, in the **Instant messaging settings** dialog box, type the Microsoft® Office Live Communications Server 2005 address.
14. In the **Administration settings** dialog box, consider the following information:
    - You must type a valid FQDN or IP address in the **Pool name** field. The setup application uses the FQDN or IP address to create the web address for the BlackBerry Administration Service.
    - You must type the password for the SSL certificate that the BlackBerry Administration Service uses for authentication with browsers.
15. In the **LDAP settings** dialog box, consider the following information:
    - You can type the URL of the LDAP server that hosts the BlackBerry device users using the following format: ldap://<*computer_name*>:<*port*>, where <*computer_name*> is the DNS name of the LDAP server, and <*port*> is the port number that the LDAP server listens for connections on (by default, port 389).
    - You can type the distinguished name of the search base URL for the area of the directory tree that contains the BlackBerry device users.
    - You can type the name and password for the administrator account that has permissions to log in to and search the LDAP server. You can type the name for the administrator account as the login name, also known as the security account manager name (for example, besadmin).
16. In the **DIIOP settings** dialog box perform the following actions:
    - In the **FQDN** field, type the FQDN of the IBM Lotus Domino server that is running the DIIOP task, or if you want to configure high availability for the DIIOP task, the FQDN of a hardware load balancer entry or software load balancer entry.
    - In the **Port number** field, type the TCP/IP port number for the DIIOP task (by default, 63148).
17. If you are using the SRP credentials of an existing BlackBerry Enterprise Server, do not start the BlackBerry Enterprise Server services.
18. In the **Console addresses** dialog box, copy the web addresses for the BlackBerry Enterprise Server components. You can use the web addresses to log in to the BlackBerry Enterprise Server components that you installed.

After you finish: As required, add the name of the BlackBerry MDS Integration Service pool to the DNS server, and change the name of the computer.

Specifying a name for the BlackBerry Administration Service pool during the installation process

During the installation process, the setup application prompts you to specify the name of the BlackBerry® Administration Service pool.

The BlackBerry Administration Service instances use the pool name for interprocess communication and when you configure BlackBerry Administration Service high availability using DNS round robin. You must specify a valid DNS host name during the installation process, even if you do not configure BlackBerry Administration Service high availability using DNS round robin.

The setup application uses the FQDN of the computer that you install the first BlackBerry Administration Service instance on as the default value for the pool name. If you keep the default value and configure BlackBerry Administration Service high availability using DNS round robin at a later time, you must use the BlackBerry Configuration Panel to change the pool name to the host name for the pool.

The name for the BlackBerry Administration Service pool does not impact BlackBerry Administration Service high availability that uses a hardware load balancer.

For more information about BlackBerry Administration Service high availability, see the *BlackBerry Enterprise Server Planning Guide*.

Move user accounts to a new BlackBerry Enterprise Server using the BlackBerry Administration Service

To complete the cutover upgrade process, you must move user accounts to the new BlackBerry® Enterprise Server. After you move the user accounts to the current BlackBerry Enterprise Server, the BlackBerry Enterprise Server sends new service books to the BlackBerry devices automatically.

1. Copy the state databases for the user accounts that you want to move to the new BlackBerry Enterprise Server.
2. In the BlackBerry Administration Service, on the **BlackBerry Solution management** menu, expand **User**.
3. Click **Manage Users**.
4. Click **Advanced**.
5. In the **BlackBerry Enterprise Server criteria** section, click the BlackBerry Enterprise Server that you want to move user accounts from.
6. Click **Search**.
7. Click **Manage multiple users.**
8. Select the user accounts that you want to move to the new BlackBerry Enterprise Server at the same time

9. Click **Switch BlackBerry user to different BlackBerry Enterprise Server**.
10. Select the new BlackBerry Enterprise Server from the list.
11. Click **Save All**.

After you finish: Reassign the IT policies to the user accounts.

Prevent the previous BlackBerry Enterprise Server from connecting to the BlackBerry Infrastructure

If you try to connect two BlackBerry® Enterprise Server instances to the BlackBerry® Infrastructure using identical SRP credentials, the BlackBerry Infrastructure deactivates the credentials, and wireless traffic stops.

1. On the computer that hosts the previous BlackBerry Enterprise Server, in the **notes.ini** file, in the ServerTasks entry, delete **BES**.
2. Save and close the file.
3. In the Windows® Services, stop all BlackBerry Enterprise Server services.
4. Change the startup type for all BlackBerry Enterprise Server services to **Disabled**.

Start the new BlackBerry Enterprise Server

In the Windows® Services, start the BlackBerry® Enterprise Server services in the following order:

- BlackBerry Controller
- BlackBerry Router
- BlackBerry Dispatcher
- all remaining services

After you finish: After you complete the upgrade process, users must reactivate their BlackBerry devices. Instruct users to connect their BlackBerry devices to the BlackBerry® Desktop Manager or BlackBerry® Web Desktop Manager to receive new SRP routing and service name information. Inform users about the new IBM® Lotus® Domino® server name so that they can update the settings in the BlackBerry Desktop Manager or BlackBerry Web Desktop Manager.

8 Upgrading the BlackBerry Enterprise Server using the cutover upgrade process and create a BlackBerry Configuration Database

Using the cutover upgrade process, you can install the BlackBerry® Enterprise Server on a new computer and move user accounts and server information from the previous BlackBerry Enterprise Server to the new one.

You can use the cutover upgrade process to create a new BlackBerry Configuration Database and BlackBerry Domain. If you create a new BlackBerry Configuration Database, you require SRP credentials for the new BlackBerry Enterprise Server. You can move user accounts from the previous BlackBerry Configuration Database to the new BlackBerry Configuration Database using the BlackBerry Enterprise Transporter.

When you use the cutover upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.1 or later receive new service books and wireless data synchronization occurs.

Advantages of this upgrade process include:

- You can move user accounts back to the previous BlackBerry Enterprise Server if you experience any issues with the new one.
- You can upgrade server hardware.
- Users experience minimal service interruptions because user accounts remain active on the previous BlackBerry Enterprise Server until you start the new one.

Disadvantages of this upgrade process include:

- You require an extra computer.
- The BlackBerry Enterprise Server sends new service books to all of the BlackBerry devices that are capable of synchronizing data over the wireless network.

Create a BlackBerry Configuration Database

If the security required by your organization does not allow applications to have permissions to create or upgrade databases, you can run the createDB executable on the database server to create the BlackBerry® Configuration Database instead of using the setup application. After you create or upgrade the BlackBerry Configuration Database using the createDB executable, you can run the setup application using a Windows® account with minimum requirements to the database server.

Before you begin: Verify that the appropriate permissions are configured on the database server.

1. Log in to the computer that hosts the database server using a local administrator account or a Windows® account that has SQL administrator permissions.
2. Copy the BlackBerry® Enterprise Server installation media to the database server that you want to configure as the host server for the BlackBerry Configuration Database.
3. Extract the contents to a folder on the computer.

4. Navigate to *<extracted_folder>*\Database.
5. Open the **BesMgmt.cfg** file in a text editor.
6. Change the file to include information that is specific to your organization's environment.
7. Save and close the file.
8. Open a command prompt window.
9. Change to *<extracted_folder>*\Database.
10. Type **CreateDB.exe BESMgmt.cfg**.

BESMgmt.cfg properties

Property	Description
DATABASE_NAME	This property specifies the name of the BlackBerry® Configuration Database.
CMD	This property specifies the type of action that the CreateDB executable must complete (for example, whether to install or upgrade the BlackBerry Configuration Database).
USERID	If you use database authentication, this property specifies the user name of the database account that has server administrator permission and database creator permission.
PASSWORD	If you use database authentication, this property specifies the password for the database account.
SCRIPT_ROOT	This property specifies the path to the DBInstallScripts folder. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
LOG_DIR	This property specifies the path to the folder that you want to create log files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
DBMS	This property specifies the database management system that your organization uses.
DB_FILE_DIR	This property specifies an existing folder that you want to save the database files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.

Property	Description
BACKUP_DIR	This property specifies an existing folder where you want to save the database backup in. By default, this folder is located in the same root folder that the CreateDB.exe file is located in.

Install the BlackBerry Enterprise Server on a new computer and create a new BlackBerry Configuration Database

During the installation process, you must restart the computer.
Note: To administer the BlackBerry® Enterprise Server, you must install the BlackBerry Administration Service. You can install the BlackBerry Administration Service on the same computer as the BlackBerry Enterprise Server or on a separate computer. The first BlackBerry Administration Service or BlackBerry Enterprise Server that you install creates and populates the BlackBerry Configuration Database, if you did not create the BlackBerry Configuration Database previously using the SQL scripts.

1. Log in to the computer using the Windows® account that you want the BlackBerry Enterprise Server services to run on.
2. Stop the IBM® Lotus® Domino® server.
3. In the Windows Services, change the startup type of the IBM Lotus Domino server to manual.
4. Double-click **setup.exe**.
5. In the **Setup type** dialog box, select **I would like the installation process to create a BlackBerry Configuration Database**.
6. In the **Setup options** dialog box, consider the following information:
   - You can select or remove BlackBerry Enterprise Server components from the **Additional Components** list.
   - To install the BlackBerry Administration Service only during the first installation, click **Remote component**. In the **Additional components** list, expand **BlackBerry administration**. Click **BlackBerry Adminstration Service**.
   - To permit administrators to log in to the BlackBerry Administration Service and BlackBerry Monitoring Service using their Microsoft® Active Directory® credentials, in the **BlackBerry administration** list, click **Use Active Directory authentication**.
7. When prompted to restart the computer, click **Yes**.
8. Log in to the computer using the same account that you used in step 1.
9. In the **Database information** dialog box, specify a new BlackBerry Configuration Database.
10. In the **Advanced database options** dialog box, consider the following information:
    - If you want to configure database mirroring, you can select **Add support for database mirroring** and type the name of the database server that hosts the mirror database in the **Name of the mirror database server** field. The setup application does not create the BlackBerry Configuration Database on the mirror Microsoft® SQL Server®; it adds a registry key to the computer that includes the name of the mirror Microsoft SQL Server.

- If you configured the database server to use static ports, you must clear the **Use dynamic ports** check box. If the static port number is not 1433, type the port number in the **Port** field.

11. In the **CAL and SRP information** dialog box, type the new SRP credentials.
12. In the **Application extensibility information** dialog box, consider the following information:
    - You can type a FQDN to create a new BlackBerry MDS Integration Service pool.
    - To configure a hardware load-balancer for the BlackBerry MDS Integration Service pool, you can type a FQDN that corresponds to a DNS record in the DNS server that maps the FQDN into the IP address of the virtual server that you configured on the hardware load-balancer.
    - You can create a new BlackBerry MDS Integration Service database or upgrade the existing BlackBerry MDS Integration Service database.
    - If you choose to create a new BlackBerry MDS Integration Service database, the setup application creates the BlackBerry MDS Integration Service database on the same database server as the BlackBerry Configuration Database.
13. If you upgrade from the BlackBerry Collaboration Service for use with Windows® Messenger, in the **Instant messaging Settings** dialog box, specify the Microsoft® Office Live Communications Server 2005 address.
14. In the **Administration settings** dialog box, consider the following information:
    - You must type a valid FQDN or IP address in the **Pool name** field. The setup application uses the FQDN or IP address to create the web address for the BlackBerry Administration Service.
    - You must type the password for the SSL certificate that the BlackBerry Administration Service uses for authentication with browsers.
15. In the **LDAP settings** dialog box, consider the following information:
    - You can type the URL of the LDAP server that hosts the BlackBerry device users using the following format: ldap://<*computer_name*>:<*port*>, where <*computer_name*> is the DNS name of the LDAP server, and <*port*> is the port number that the LDAP server listens for connections on (by default, port 389).
    - You can type the distinguished name of the search base URL for the area of the directory tree that contains the BlackBerry device users.
    - You can type the name and password for the administrator account that has permissions to log in to and search the LDAP server. You can type the name for the administrator account as the login name, also known as the security account manager name (for example, besadmin).
    - You can verify the LDAP server URL and the LDAP search base by clicking **Query**.
16. In the **DIIOP settings** dialog box perform the following actions:
    - In the **FQDN** field, type the FQDN of the IBM Lotus Domino server that is running the DIIOP task, or if you want to configure high availability for the DIIOP task, the FQDN of a hardware load balancer entry or software load balancer entry.
    - In the **Port number** field, type the TCP/IP port number for the DIIOP task (by default, 63148).
17. In the **Start services** dialog box, do not start the BlackBerry Enterprise Server services.
18. Click **Finish**.

After you finish: Move user accounts to the BlackBerry Enterprise Server using the BlackBerry Enterprise Transporter. For more information about moving user accounts, see the *BlackBerry User Migration Tool Administration Guide*.

Specifying a name for the BlackBerry Administration Service pool during the installation process

During the installation process, the setup application prompts you to specify the name of the BlackBerry® Administration Service pool.

The BlackBerry Administration Service instances use the pool name for interprocess communication and when you configure BlackBerry Administration Service high availability using DNS round robin. You must specify a valid DNS host name during the installation process, even if you do not configure BlackBerry Administration Service high availability using DNS round robin.

The setup application uses the FQDN of the computer that you install the first BlackBerry Administration Service instance on as the default value for the pool name. If you keep the default value and configure BlackBerry Administration Service high availability using DNS round robin at a later time, you must use the BlackBerry Configuration Panel to change the pool name to the host name for the pool.

The name for the BlackBerry Administration Service pool does not impact BlackBerry Administration Service high availability that uses a hardware load balancer.

For more information about BlackBerry Administration Service high availability, see the *BlackBerry Enterprise Server Planning Guide*.

Upgrading the BlackBerry Enterprise Server software in phases 9

Using the phased upgrade process, you can maintain previous versions of the BlackBerry® Enterprise Server software, install additional BlackBerry Enterprise Server instances over time, and move user accounts to the latest BlackBerry Enterprise Server versions.

When you use the in-place upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.0 or later receive new service books and wireless data synchronization occurs. When you move user accounts, the BlackBerry Messaging Agent copies the BlackBerry state databases to the new BlackBerry Enterprise Server.

Advantages of this upgrade process include:

- You can move user accounts to the new BlackBerry Enterprise Server instances gradually to limit the number of service books and IT policies that the BlackBerry Policy Service sends to BlackBerry devices at the same time.
- You can monitor system performance as you add user accounts.
- You can change your organization's environment during the upgrade process by changing which user accounts you associate with each BlackBerry Enterprise Server instance.

Disadvantages of this upgrade process include:

- You require extra computers.
- You require additional SRP credentials.
- If you move user accounts from one BlackBerry Configuration Database to another, you lose the BlackBerry device options that you backed up in the BlackBerry Configuration Database.
- You cannot use some new features (for example, one-to-many relationships between a BlackBerry MDS Connection Service or BlackBerry Collaboration Service and multiple BlackBerry Enterprise Server instances) in the BlackBerry Enterprise Server until all BlackBerry Enterprise Server components are the same version.

Upgrade multiple BlackBerry Enterprise Server instances in phases

You can upgrade the BlackBerry® Enterprise Server instances in your organization's environment in phases to minimize the impact on users.

Before you begin: If you want to create a new BlackBerry Configuration Database, instruct users to back up their BlackBerry devices. Any BlackBerry device options that are stored in the existing BlackBerry Configuration Database are deleted when you add user accounts to the new BlackBerry Configuration Database.

1. Install the latest BlackBerry Enterprise Server version with the BlackBerry Administration Service on a separate computer.
2. If you create a new BlackBerry Configuration Database, create roles, administrator accounts, groups, IT policies, and software configurations for your organization's environment.

3. If you upgrade an existing BlackBerry Configuration Database, remove BlackBerry Manager instances from your organization's environment.
4. Move user accounts to the upgraded BlackBerry Enterprise Server by performing one of the following actions:
   - To upgrade an existing BlackBerry Configuration Database, move user accounts using the BlackBerry Administration Service.
   - To create a new BlackBerry Configuration Database, move user accounts using the BlackBerry Enterprise Transporter.
5. Upgrade instances of the central push server for the BlackBerry MDS Connection Service.
6. Upgrade the earlier BlackBerry Enterprise Server version using an in-place upgrade process. You can use the upgraded BlackBerry Enterprise Server instance as the destination for user accounts that you move from earlier BlackBerry Enterprise Server versions.
7. Move user accounts to the upgraded BlackBerry Enterprise Server instances, and upgrade the old BlackBerry Enterprise Server instances until all BlackBerry Enterprise Server instances are running the latest software version.

After you finish: To enable BlackBerry device users to access the features that are part of the latest version, upgrade the BlackBerry® Device Software. For more information, see the *BlackBerry Device Software Update Guide*.

Postupgrade tasks

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Best practice: Running the BlackBerry Enterprise Server

Best practice	Description
Do not change the startup type for the BlackBerry® Enterprise Server services.	When you install or upgrade the BlackBerry Enterprise Server, the setup application configures the startup type for the BlackBerry Enterprise Server services to automatic or manual. For example, the setup application configures the startup type for the BlackBerry MailStore Service, BlackBerry Policy Service, and BlackBerry Synchronization Service to manual. To avoid errors in the BlackBerry Enterprise Server, do not change the startup type for the BlackBerry Enterprise Server services.
Do not change the account information for BlackBerry Enterprise Server services.	When you install or upgrade the BlackBerry Enterprise Server, the setup application configures the account information for the BlackBerry Enterprise Server services. Do not change the account information for the BlackBerry Enterprise Server unless the BlackBerry Enterprise Server documentation specifies that you can.
Run the BlackBerry Configuration Panel as an administrator.	Consider the following guidelines if you are running the BlackBerry Configuration Panel on Windows Server® 2008: • Log in to the computer with a user account that is in the Administrator group on the Windows Server. • Right-click the BlackBerry Configuration Panel icon and click Run as administrator.
Use Windows® Services to stop and start the BlackBerry Messaging Agent.	To stop and start the BlackBerry Messaging Agent after you have made changes to the configuration, stop and start the BlackBerry Controller service and BlackBerry Dispatcher service in the Windows Services, or stop and start the BlackBerry Enterprise Server in the BlackBerry Administration Service. You should not use the IBM® Lotus® Domino® console to stop and start the BlackBerry Messaging Agent. If you use the IBM Lotus Domino console, the BlackBerry Messaging Agent libraries might not load properly and, if you configure high availability, the BlackBerry Messaging Agent might not start correctly as the primary or standby instance.

Log in to the BlackBerry Administration Service for the first time

To open the BlackBerry® Administration Service, you can use a browser on any computer that has access to the computer that hosts the BlackBerry Administration Service.

Before you begin: To manage a BlackBerry device using the BlackBerry Administration Service while the BlackBerry device is connected to the computer, the browser must permit Microsoft® ActiveX® controls.

1. In the browser, type **https://<*server_name*>/webconsole/app**, where <*server_name*> is the name of the computer that hosts the BlackBerry Administration Service.
2. In the **User name** field, type **admin**.
3. In the **Password** field, type the password that you created during the installation process.
4. In the **Log in using** drop-down list, click **BlackBerry Administration Service**.
5. Click **Log in**.

Configuring BlackBerry MDS Integration Service high availablility during the upgrade process

The setup application creates a separate pool for each BlackBerry® MDS Integration Service instance that you upgrade. You cannot add the upgraded BlackBerry MDS Integration Service instances to a pool so that you can configure high availability. You can configure high availability only for new BlackBerry MDS Integration Service instances that you install.

You can consider upgrading a BlackBerry MDS Integration Service instance to the latest version if one of the following conditions apply:

- Your organization uses the BlackBerry MDS Integration Service as a standalone service and does not have plans to configure BlackBerry MDS Integration Service high availability.
- Your organization plans to configure BlackBerry MDS Integration Service high availability and the existing BlackBerry MDS Integration Service version 4.1 instance is installed on a computer that does not have other software (for example, a database server or third-party applications) installed on it.

If your organization plans to configure BlackBerry MDS Integration Service high availability, you must upgrade the BlackBerry MDS Integration Service version 4.1 instance as the first instance in the BlackBerry MDS Integration Service pool. You must use the FQDN of the computer that hosts the BlackBerry MDS Integration Service instance as the virtual name of the BlackBerry MDS Integration Service pool.

If one of the above conditions do not apply, you can consider installing the latest BlackBerry MDS Integration Service version on new computers. When you do so, after installing the BlackBerry MDS Integration Service instances, you must republish the BlackBerry® MDS Runtime Applications.

Install a BlackBerry MDS Integration Service pool in an upgraded environment

When you install new BlackBerry® MDS Integration Service instances in an upgraded environment instead of upgrading existing BlackBerry MDS Integration Service instances, you lose backend notification subscriptions. BlackBerry devices that run BlackBerry® MDS Runtime Application versions earlier than version 4.5 remove the applications.

1. Install all BlackBerry MDS Integration Service instances in the pool.
2. Publish all existing BlackBerry MDS Runtime Applications.
3. Install all BlackBerry MDS Runtime Applications on a test BlackBerry device.
4. To migrate users from BlackBerry MDS Integration Service version 4.1 to the new BlackBerry MDS Integration Service pool, in the BlackBerry Administration Service, update the BlackBerry Enterprise Server to associate with the new BlackBerry MDS Integration Service pool.

After you finish:

- Configure backend notification subscriptions.
- Resend applications to BlackBerry devices that run BlackBerry MDS Runtime Application versions earlier than version 4.5.
- For more information, see the *BlackBerry Enterprise Server Installation Guide*.

Change applications to support BlackBerry MDS Connection Service failover

In earlier versions of the BlackBerry® Enterprise Server, an organization's push applications connected to only one instance of the BlackBerry MDS Connection Service central push server. You must make sure that your organization's applications can access all central push servers.

1. Change the applications to access central push servers only, and not BlackBerry MDS Connection Service instances that administrators have not configured to also act as central push servers.
2. To change your organization's applications to support central push server failover, perform one of the following actions:
   - Configure an HTTP or HTTPS proxy server that applications send requests through. Use this option if the applications are located on the Internet. Optionally, you can place the proxy server in the DMZ.
   - Configure the application servers to use a list of IP addresses to find an available central push server. If a central push server does not respond to a request, the application can try to connect to another central push server.
   - Configure a hardware load balancer such as the BIG-IP® load balancer. The load balancer accepts all requests from the application servers, and distributes the traffic to the various central push servers. If a central push server does not respond, the load balancer redistributes the requests to the remaining central push servers.
   - Configure the application to use the new HTTP response header x-rim-push-gateways.

Configuring support for new attachments

Configure an upgraded BlackBerry Enterprise Server to support new attachment extensions

When you upgrade a BlackBerry® Enterprise Server instance, the upgrade process does not automatically add the new attachment extensions that the latest BlackBerry Enterprise Server version supports. You must add the new attachment extensions after the upgrade process completes so that the BlackBerry Enterprise Server can recognize the new attachments and send them to a BlackBerry Attachment Service instance for processing. The following list of supported file formats were added to versions later than BlackBerry Enterprise Server version 4.1 SP3: .amr*, .wmf, .wma, .pptx, .docx, .xlsx, .odt and .ott files.

1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view > Attachment > Connector**.
2. Click the BlackBerry Attachment Connector instance for the BlackBerry Enterprise Server.
3. Click **Edit instance**.
4. Click **Supported Attachment Server instances**.
5. For the BlackBerry Attachment Service instance that you want the BlackBerry Enterprise Server to send new attachments to, click the **Edit** icon.
6. Add the new attachments to the attachments extensions list.
7. Click the **Save** icon.
8. Click **Save all**.
9. Restart the BlackBerry Enterprise Server by performing the following actions:
   a. On the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view > BlackBerry Enterprise Server**.
   b. Click the BlackBerry Enterprise Server instance that you upgraded.
      Click **Restart instance**.

Configure an upgraded BlackBerry Attachment Service to support new attachment distillers

During the upgrade process for a BlackBerry® Attachment Service instance, the setup application does not turn on the new attachment distillers automatically. If you want the BlackBerry Attachment Service to process new attachments, you must turn on the attachment distillers for these file formats. The following supported file formats were added to versions later than BlackBerry Enterprise Server version 4.1 SP3: .amr*, .wmf, .wma, .pptx, .docx, .xlsx, .odt and .ott files.

1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view > Attachment > Server**.
2. Click the instance that you upgraded.
3. Click **Edit instance**.

4. In the **Distiller** section, in the **Allowed** column, turn on the attachment distillers that you want the BlackBerry Attachment Service to support.
5. If required, in the **Distiller** section, in the **Attachment size (KB)** column, change the file size, in KB, for the new attachments.
6. Click **Save**.

Assigning an IT policy to a group

After you complete the upgrade process, you can assign an IT policy to a group. When you assign an IT policy to a group, the BlackBerry® Enterprise Server can assign the IT policy to each user account in the group. However, if an IT policy is already assigned to a user account in a group, the BlackBerry Enterprise Server sends the IT policy that is assigned to the user account to the BlackBerry device. To use the IT policy that is assigned to the group, you must remove the IT policy that is assigned to the user account.

Remove an IT policy from a user account

Before you begin: Assign an IT policy to a group that includes the user account.

1. In the BlackBerry® Administration Service, on the **BlackBerry solution management** menu, expand **User**.
2. Click **Manage users**.
3. Search for the user account.
4. Click the user account.
5. On the **Policies** tab, click **Edit user**.
6. In the drop-down list, click the blank option (the first entry in the drop-down list) to remove the IT policy.
7. Click **Save all**.

After you finish: Resend the IT policy to the user account.

Restrict database permissions for the BlackBerry Attachment Service

The BlackBerry® Attachment Service accesses the BlackBerry Configuration Database to read attachment data using a Windows® account or a SQL authentication account. To limit the access that the BlackBerry Attachment Service account has to the tables in the BlackBerry Configuration Database, you can configure a BlackBerry Attachment Service account that has limited database permissions. This account is not the same as the account that the BlackBerry® Enterprise Server uses to access the BlackBerry Configuration Database.

Before you begin:

- Create a Windows® account for the BlackBerry Attachment Service.
- To use database authentication, create a SQL authentication account for the BlackBerry Attachment Service.

1. In the Microsoft® SQL Server® management console, create a SQL login for the Windows account or SQL authentication account.
2. Assign the account to the rim_db_AttachmentServer role in the BlackBerry Configuration Database.
3. If you want the BlackBerry Attachment Service to use a SQL authentication account to access the BlackBerry Configuration Database, perform the following actions:
    a. On the computer that you installed the BlackBerry Attachment Service on, log in using the Windows account that the BlackBerry Attachment Service is running on.
    b. Click **Start > Run**.
    c. Type **regedit**. Click **OK**.
    d. Navigate to HKEY_CURRENT_USER\SOFTWARE\Research In Motion.
    e. Create the BBAttachServer\Database keys.
    f. In the Database key, create the **Login** and **Password** string values for the SQL authentication account.

After you finish: After you complete the BlackBerry Attachment Service installation process, in the Windows Services, verify that the service for the BlackBerry Attachment Service is using the Windows account that you configured. If you need to change the account information, restart the BlackBerry Attachment Service.

Configuring minimum Microsoft SQL Server permissions for the Windows account

The BlackBerry® Enterprise Server setup application requires the Windows® account that it uses during the installation process or upgrade process to have Microsoft® SQL Server® permissions to create or upgrade the BlackBerry Configuration Database. The setup application requires the Windows account to have more Microsoft SQL Server permissions to install the BlackBerry Enterprise Server than the BlackBerry Enterprise Server requires to run.

After the installation or upgrade process completes, you can change the Microsoft SQL Server permissions of the Windows account to the Microsoft SQL Server permissions that the BlackBerry Enterprise Server requires to run. When you change the Microsoft SQL Server permissions of the Windows account, you can use Microsoft SQL Server security to minimize the operations that the Windows account can perform on the BlackBerry Configuration Database.

The following table describes the Microsoft SQL Server permissions for the setup application and the Windows account that the BlackBerry Enterprise Server uses to run.

Server and database roles	Description
db_owner	The setup applicaton requires this role to install and upgrade the BlackBerry Configuration Database, BlackBerry MDS Integration Service database, and BlackBerry Monitoring Service database.

Server and database roles	Description
	You can remove this role from the Windows account that the BlackBerry Enterprise Server uses to run after the setup application creates or upgrades the BlackBerry Configuration Database.
rim_db_bes_server	The BlackBerry Enterprise Server requires this role to run the BlackBerry Enterprise Server services. The setup application or the createDB executable creates the role automatically when it creates the BlackBerry Configuration Database. This role is the minimum Microsoft SQL Server permission for running the BlackBerry Enterprise Server.

Configure minimum Microsoft SQL Server permissions for the Windows account

You can configure the minimum Microsoft® SQL Server® permissions for the Windows® account that the BlackBerry® Enterprise Server uses to run.

1. Open the Microsoft SQL Server console.
2. Expand **Microsoft SQL Server > Security > Logins**.
3. Right-click the Windows account that the BlackBerry Enterprise Server uses to run. Click **Properties**.
4. Map the Windows account to the BlackBerry Configuration Database.
5. Change the **Database role membership** to **rim_db_bes_server**.
6. Remove all other database role memberships.
7. Apply your changes.

Configuring a computer for monitoring

Configure the SNMP service for monitoring

You can configure the SNMP service on the computer that hosts the BlackBerry® Enterprise Server so that the BlackBerry Monitoring Service can monitor BlackBerry Enterprise Server activity.

Before you begin: Verify that the SNMP service is installed and running.

1. On a computer that hosts the BlackBerry Enterprise Server or BlackBerry Enterprise Server components, in the Windows® Services, right-click **SNMP Service**. Click **Properties**.
2. On the **General** tab, change the startup type to **Automatic**.
3. On the **Traps** tab, in the **Community name** field, type the community name for the SNMP service. The field is case-sensitive.
4. In the **Trap Destinations** section, add the IP address of the computer that hosts the BlackBerry Monitoring Service.

5. On the **Security** tab, in the **Accepted community names** section, add the community name that you typed in step 3. The SNMP community name is read-only.
6. Select the **Accept SNMP packets from any host** or **Accept SNMP packets from these hosts** option, depending on your organization's environment.
7. If you selected **Accept SNMP packets from these hosts**, type the IP address of the computer that hosts the BlackBerry Monitoring Service.
8. Click **Apply**.
9. In the **Services** list, right-click **SNMP Service**. Click **Restart**.

Configure the BlackBerry Monitoring Service to monitor a BlackBerry Enterprise Server

Before you begin: Verify that the computer that hosts the BlackBerry® Enterprise Server has access to the computer that hosts the BlackBerry Monitoring Service.

1. In a browser, type **https://<*server_name*>:8443/webconsole/app**, where <*server_name*> is the FQDN of the computer that hosts the BlackBerry Monitoring Service.
2. Log in as an administrator that has permissions to access the BlackBerry Monitoring Service.
3. On the **Configuration** menu, expand **Servers**.
4. Click **Manage Servers**.
5. Click the **Edit** icon for the BlackBerry Enterprise Server that you want the BlackBerry Monitoring Service to monitor.
6. In the **SNMP Configuration** section, type the SNMP port number that the SNMP service on the BlackBerry Enterprise Server computer uses.
7. In the **SNMP Configuration** section, type the SNMP community name that the SNMP service on the BlackBerry Enterprise Server computer uses.
8. In the **SNMP Configuration** section, select the **Monitoring status** check box.
9. Click **Save**.

Configure the BlackBerry MailStore Service to use a local system account

After you complete the BlackBerry® Enterprise Server installation process, you can change the account that the BlackBerry MailStore Service uses to run to a local system account. If you do so, the BlackBerry MailStore Service does not start and you cannot log in to the BlackBerry Administration Service unless you add the executables for IBM® Lotus® Domino® to the system environment variables.

Note: You cannot configure the BlackBerry Administration Service services to use a local system account. The BlackBerry Administration Service console cannot run when you configure the BlackBerry Administration Service services to use a local system account.

Before you begin: Verify that the local system account has permission to access the Internet.

1. On the computer that hosts the BlackBerry Enterprise Server, right-click **My Computer**. Click **Properties**.
2. On the **Advanced** tab, click **Environment Variables**.
3. Add the path to the IBM Lotus Domino installation folder to the Path system variable (for example, C:\Program Files\Lotus \Domino\nserver.exe)
4. Click **OK**.
5. Restart the computer.

Troubleshooting the BlackBerry Enterprise Server upgrade process 11

Failed to write License Key to the Database

This error message appears when you try to add the BlackBerry® Client Access License key during the installation process.

Possible solution

After you restart the computer during the BlackBerry® Enterprise Server installation process, you must log in using the same Windows® account that you used to start the installation process.

1. Close the setup application.
2. Log out of the computer.
3. Log in to the computer.
4. Restart the setup application.

Previous version detected but no database available

This error message appears when you cannot start the setup application or the setup application stops responding.

Possible solution

Verify that the registry keys that identify the BlackBerry® Configuration Database exist in the Windows® registry.

1. On the computer that you want to install or upgrade the BlackBerry® Enterprise Server on, on the **Start** menu, click **Run**.
2. Type **regedit**.
3. Click **OK**.
4. In the left pane, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server \Database.
5. If necessary, create case-sensitive strings that you name **DatabaseName** and **DatabaseServerMachineName**.
6. Specify the name of the BlackBerry Configuration Database as the value for **DatabaseName**.
7. Specify the FQDN name of the database server as the value for **DatabaseServerMachineName**.
8. Restart the setup application.

Could not open ID file

This message displays when you start the BlackBerry® Enterprise Server setup application but it closes unexpectedly.

Possible solution

1. If you installed the IBM® Lotus® Domino® server recently but you did not start it yet, start it and stop it.
2. Restart the setup application.

Attempt to establish connection failed with security reason "3"

This message appears in the IBM® Lotus® Domino® console after you install and start the BlackBerry® Enterprise Server and IBM Lotus Domino server.

Possible solution

Configure the local Windows® account that the BlackBerry Enterprise Server uses for database authentication to connect to the remote BlackBerry Configuration Database.

You encounter errors when you try to upgrade the BlackBerry Configuration Database

Possible solution

1. Navigate to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs\Installer or to the location of the log files that you specified in the setup application.
2. Open **DB_InstallV<*YYMMDDHHMMSS*>.log**, where *<YYMMDDHHMMSS>* specifies the date and time, in 24 hour clock format, that you upgraded the BlackBerry® Configuration Database.
3. Check the log file for error messages.

You cannot resolve errors that occur when you move users

Possible solution

1. Delete the user accounts from the BlackBerry® Enterprise Server before you start the upgrade process.
2. Add the user accounts to the BlackBerry Enterprise Server when the upgrade process completes.
3. Activate users' BlackBerry devices over the wireless network.

A third-party tool did not install and the BlackBerry Enterprise Server setup application closed

Possible solution

1. On the BlackBerry® Enterprise Server installation media, open the **Tools** folder.
2. Double-click the setup application file for the tool that you want to install.
3. Complete the instructions on the screen.
4. Restart the BlackBerry Enterprise Server setup application.

The BlackBerry Monitoring Service cannot monitor events

Possible cause

The SNMP service was not installed before the BlackBerry® Enterprise Server software was installed.

Possible solution

To permit the BlackBerry Monitoring Service to monitor a BlackBerry Enterprise Server activity, you can install the SNMP service on the computer after you install a BlackBerry Enterprise Server.

1. Verify that the computer has access to the Windows® installation media.
2. On the computer that hosts the BlackBerry Enterprise Server or BlackBerry Enterprise Server components, on the taskbar, click **Start > Settings > Control Panel > Add/Remove Programs > Add/Remove Windows Components**.
3. Double-click **Management and Monitoring Tools**.
4. Select the **Simple Network Management Protocol** check box.
5. Click **OK**.
6. When the installation wizard prompts you, install the files from the Windows installation media.
7. Complete the installation wizard.

To complete the installation process, configure the SNMP service to monitor the BlackBerry Enterprise Server activity.

Restore a BlackBerry Configuration Database

If you created a copy of the BlackBerry® Configuration Database using the CreateDB tool, you can restore the copy if you determine that the upgrade process did not complete successfully.

1. In the Windows® Services, stop the BlackBerry® Enterprise Server services.
2. On the server that hosts the BlackBerry Configuration Database, open a command prompt window.

3. Change to *<extractedfolder>*\Tools.
4. Type **BlackBerryDBRestore.exe**.
5. Type the same parameters that you used when you backed up the BlackBerry Configuration Database.
6. Press ENTER.

Various BlackBerry Enterprise Server components do not start

Possible cause	Possible solution
The BlackBerry® Administration Service, BlackBerry MDS Connection Service, BlackBerry MDS Integration Service, or BlackBerry Collaboration Service is configured to use a dynamic port when it connects to the BlackBerry Configuration Database, but the database server uses a static port.	Configure a static port for the BlackBerry Configuration Database. 1. On the computer that hosts the BlackBerry® Enterprise Server component, on the taskbar, click **Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration**. 2. On the **Database Connectivity** tab, clear the **Use dynamic ports or specify SQL port** check box. 3. Type the port number in the **Use dynamic ports or specify SQL port** field. 4. Click **OK**. 5. In the Windows® Services, restart the services for the BlackBerry Enterprise Server component.
The BlackBerry Administration Service, BlackBerry MDS Connection Service, BlackBerry MDS Integration Service, or BlackBerry Collaboration Service is configured to use an incorrect static port number when it connects to the BlackBerry Configuration Database.	Configure the component to use the correct port number. 1. On the computer that hosts the BlackBerry Enterprise Server component, on the taskbar, click **Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration**. 2. Type the correct port number in the **Use dynamic ports or specify SQL port** field. 3. Click **OK**. 4. In the Windows Services, restart the services for the BlackBerry Enterprise Server component.

Could not create a user account in the BlackBerry Administration Service

Possible cause

The BlackBerry® Administration Service is configured to use static ports when it connects to the BlackBerry Configuration Database server, but the BlackBerry Configuration Database server uses a dynamic port.

Possible solution

Configure the BlackBerry Administration Service to use a dynamic port for the BlackBerry Configuration Database.

1. On the computer that hosts the BlackBerry® Enterprise Server or BlackBerry Enterprise Server components, on the taskbar, click **Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration**.
2. On the **Database Connectivity** tab, select the **Use dynamic ports or specify SQL port** check box.
3. Click **OK**.
4. In the Windows® Services, restart the services for the BlackBerry Administration Service.

The BlackBerry Administration Service pool name is the same as the FQDN of the host computer

Possible cause

A DNS record was not created before a BlackBerry® Administration Service instance was installed.

Possible solution

1. Create the DNS record for the BlackBerry Administration Service instance.
2. On the computer that hosts the BlackBerry Administration Service instance, on the taskbar, click **Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration**.
3. On the **Administration Service - High Availability** tab, in the **Pool name** field, type the name of the BlackBerry Administration Service pool.
4. In the Windows® Services, restart the services for the BlackBerry Administration Service.

IBM Lotus Domino takes a long time to complete cluster replication

Possible cause

By default, IBM® Lotus® Domino® servers use only one cluster replicator. If the IBM Lotus Domino servers take a long time to replicate the cluster, you can add cluster replicators to the IBM Lotus Domino servers.

Possible solution

Add cluster replicators to the IBM Lotus Domino servers. For more information about cluster replicators, including metrics that you can use to determine how many cluster replicators the IBM Lotus Domino servers require, see the IBM Lotus Domino documentation.

Glossary

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AJAX
Asynchronous JavaScript® and XML

BlackBerry Client Access License
A BlackBerry® Client Access License (BlackBerry CAL) limits how many users you can add to a BlackBerry® Enterprise Server.

BlackBerry Domain
A BlackBerry Domain consists of the BlackBerry Configuration Database with its users and any BlackBerry® Enterprise Server instances that connect to it.

BlackBerry Enterprise Server databases
The BlackBerry® Enterprise Server databases are the BlackBerry Configuration Database, the BlackBerry MDS Integration Service database, and the BlackBerry Monitoring Service database.

BlackBerry MDS
BlackBerry® Mobile Data System

DIIOP
Domino Internet Inter-ORB Protocol

DMZ
A demilitarized zone (DMZ) is a neutral subnetwork outside of an organization's firewall. It exists between the trusted LAN of the organization and the untrusted external wireless network and public Internet.

DNS
Domain Name System

FQDN
fully qualified domain name

HTTPS
Hypertext Transfer Protocol over Secure Sockets Layer

IBM DB2 UDB
IBM® DB2® Universal Database

IP address
An Internet Protocol (IP) address is an identification number that each computer or mobile device uses when it sends or receives information over a network, such as the Internet. This identification number identifies the specific computer or mobile device on the network.

JDK
Java® Development Kit

JRE
Java® Runtime Environment

LDAP
Lightweight Directory Access Protocol

LMM
The Low Memory Manager (LMM) is an application on the BlackBerry device that deletes medium-priority items, such as old email messages and out-of-date calendar entries, when the amount of available flash memory on the BlackBerry device is less than 400 KB.

messaging server
A messaging server sends and processes messages and provides collaboration services, such as updating and communicating calendar and address book information.

MSDE
Microsoft® SQL Server® Desktop Engine

MTLS
Mutual Transport Layer Security

SNMP
Simple Network Management Protocol

SQL
Structured Query Language

SRP
Server Routing Protocol

SSL
Secure Sockets Layer

XML
Extensible Markup Language

Provide feedback

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Legal notice

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